

Application No.: 09/704904

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REMARKS

Applicants thank the Examiner for his time to meet with Applicants' attorney to discuss Applicants' invention. Claims 1, 3-9, 12-13, 15-19, and 22-29 were presented for examination. Applicants hereby amend claims 1, 12 and 22. No new matter is added. Support for the amendment can be found throughout the application and at least at page 12, lines 3-7, page 13, lines 6-17, and page 32, lines 7-9. Upon entry of this amendment, claims 1, 3-9, 12-13, 15-19, and 22-29 are presented for examination, of which claims 1, 12, and 22 are independent.

As discussed with the Examiners, Applicants provide the following comments, relating to the interview between the Examiner and the Applicants' attorney, beginning with a review of the claimed invention.

Independent claim 1 recites a method for partial page regeneration of a transmitted page by a server, said method comprising:

- (a) receiving, at a server, page generation code that generates a page, the page comprising a plurality of dynamic portions;
- (b) transmitting, from the server, said page to a client for display;
- (c) associating, by the server, a portion of said received page generation code with data and an executable code fragment;
- (d) receiving, by the server, a notification of a change in the data associated with the portion of the received page generation code;
- (e) executing, by the server in response to receiving the notification of the change, said associated executable code fragment of said code to produce a modified version of one of the plurality of dynamic portions of said displayed page; and
- (f) transmitting to the client the modified version of the one of the plurality of dynamic portions and a command for instructing the client to replace the one of the plurality of dynamic portions specified by an identifier using the modified version of the one of the dynamic portions without transmitting a modified version of the entire displayed page.

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(a) receiving at a server page generation code that generates a page

Independent claim 1 recites a step of receiving, at a server, page generation code that generates a page, the page comprising a plurality of dynamic portions. A server can receive page generation code from any source. See Specification, page 11, line 14. The page generation code includes a plurality of code fragments. Each code fragment generates one or more page portions. See Specification, page 12, lines 9-16. For example, as shown during the interview between the Examiners and Applicants' attorney, page generation code may be code that generates a table of stock prices. Each entry of the stock table corresponds to a code fragment that generates the entry. Since each code fragment may be selectively executed, each code fragment creates a dynamic portion of a page.

(b) transmitting from the server said generated page to a client for display

Independent claim 1 further recites a step of transmitting, from the server, said generated page to a client for display. The server transmits the generated page or portions of a page to a client. See Specification page 13, lines 7-12. For example, as shown during the interview between the Examiners and Applicants' attorney, a server generates a page and sends the generated page for a client for display.

(c) associating by the server a portion of said received
page generation code with data and an executable code fragment

Independent claim 1 also recites a step of associating, by the server, a portion of said received page generation code with data and an executable code fragment. There are correspondences between page portions and code fragments of page generation code. There are further correspondences between code fragments of page generation code and data upon which the code fragments depend. See page 12, lines 9-21. For example, as shown during the interview between the Examiners and Applicants' attorney, each entry of the stock table corresponds to a code fragment that generates the entry and each code fragment corresponds to data that provides the most updated stock price for the corresponding entry.

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(d) receiving by the server a notification of a change
in the data associated with the portion of the received page generation code

Independent claim 1 further recites a step of receiving, by the server, a notification of a change in the data associated with the portion of the received page generation code. A monitor is used to monitor change in data upon which the code fragments depend; and a notice is sent to the server regarding a change in data. See page 13, lines 14-17. For example, as shown during the interview between the Examiners and Applicants' attorney, when a user wishes to rearrange the list of companies in the table of stock prices, the server is notified of such change. The server may also be notified of other changes in the table, such as an addition or deletion of a company from the list of companies in the table. Additionally, the server is also notified of a change in stock price so that it can re-execute the portion of the page generation code that corresponds to the stock price and update the stock price that is displayed on the client. Applicants respectfully submit that the server may be notified regarding any changes to the table of stock prices.

(e) executing said associated executable code fragment of said code to produce
a modified version of one of the plurality of dynamic portions of said displayed page

Independent claim 1 also recites a step of executing, by the server in response to receiving the notification of the change, said associated executable code fragment of said code to produce a modified version of one of the plurality of dynamic portions of said displayed page. After a change in data is notified, the server re-executes the corresponding code fragment to generate a modified version of the dynamic portion. See page 32, lines 6-9. For example, as shown during the interview between the Examiners and Applicants' attorney, when the server is notified of input regarding the user's wishes to rearrange the list of companies in the table of stock prices, the server executes at least one executable code fragment that corresponds to the input in the stock table. Other changes in the list of companies in the stock table may also trigger an execution of at least one executable code fragment, such as addition or deletion of a company. Additionally, at least one executable code fragment may also be executed when the server is notified of a change in stock price of a company that the user has listed in the stock table. Applicants respectfully submit that there are many events that may trigger the execution of at least one executable code fragment. Applicants further submit that only the dynamic portions

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that have changed would the corresponding executable code fragment be executed. In other words, executable code fragments correspond to unchanged dynamic portions would not be executed.

(f) transmitting to the client the modified version of
the one of the plurality of dynamic portions and a command

Independent claim 1 also recites a step of transmitting to the client the modified version of the one of the plurality of dynamic portions and a command for instructing the client to replace the one of the plurality of dynamic portions specified by an identifier using the modified version of the one of the dynamic portions without transmitting a modified version of the entire displayed page. In one embodiment of the present invention, an identification tag is used to identify each generated page portion. The identification tag is created by additional code that is used to wrap around a code fragment. See Specification page 18, lines 9-11, and page 22. In one embodiment of the present invention, additional code creates an identification tag to identify the beginning of the portion of the page that the additional code code fragment produces. The additional code further generates HTML span tags for the identification tag to establish both the start and end of the page portion that the additional code generates. See page 18, lines 9-11 and page 23, lines 3-9. The identifier and the modified version of the one of the plurality of dynamic portions are transmitted to the client.

For example, as shown during the interview between the Examiners and Applicants' attorney, additional code is generated to wrap around each executable code fragment and an identifier (SPAN tag) is included in the additional code to identify the corresponding dynamic portion of each executable code fragment. The identifier is transmitted with the modified version of one of the dynamic portions so that the client knows how to identify which dynamic portion is going to be replaced by the modified version.

Furthermore, the server only transmits to the client a modified portion of the page without transmitting a modified version of the entire page. See page 18, lines 16-17 and page 37, lines 8-13. For example, as shown during the interview between the Examiners and Applicants' attorney, when a modified version of a dynamic portion is incorporated into the table of stock

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prices, the entire web page is not refreshed, but rather only the corresponding portion is replaced with the modified version.

Additionally, commands are sent with the generated page portions to the client so that the commands can instruct the client on how to incorporate the generated page portions into the currently displayed page. See Specification page 18, lines 11-14. For example, a copy command may instruct the client to copy the portion contained in identification tag "2" to the portion contained in identification tag "4". See page 26, lines 1-8. In another example, an assign command may instruct the client to replace the contents corresponds to identification tag "3" with a newly transmitted portion with the identification tag "5". See page 27, lines 11-21.

For example, as shown during the interview between the Examiners and Applicants' attorney, a command is transmitted from server to instruct the client how to incorporate the modified version of a dynamic portion into the currently displayed stock table. For example, the server may issue a copy command that instruct the client to copy entries in the first row of the stock table to the third row of the stock table. In another example, the server may instruct the client to replace the old stock price in an entry with the updated stock price. Applicants respectfully submit that these examples are not meant to limit the scope of the present invention, and there are other commands and identification mechanism that may be used with the present invention.

Applicants respectfully submit that independent claims 12 and 22 include similar elements and limitations as independent claim 1.

Claim Rejection

Claims 1, 3-5, 9, 12, 13, 15-17, and 22-27 were rejected under 35 U.S.C. §103(a) as over United States Patent No. 6,094,662 to Hawes (hereafter "Hawes") in view of United States Patent No. 6,192,382 to Lafer et al. (hereafter "Lafer"). Claims 6-8, 18, 19, 28, and 29 were rejected under 35 U.S.C. §103(a) as over Hawes and Lafer further in view of United States Patent No. 6,112,242 to Jois et al. (hereafter "Jois"). Applicants respectfully submit that the combination of Hawes, Lafer, and Jois do not teach or suggest each and every element or limitation of independent claims 1, 12, and 22, as amended. Specifically, the combination of

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these references do not teach or suggest the limitation of receiving, by the server, a notification of a change in the data associated with the portion of the received page generation code; executing, by the server in response to receiving the notification of the change, said associated executable code fragment of said code to produce a modified version of one of the plurality of dynamic portions of said displayed page and transmitting to the client the modified version of the one of the plurality of dynamic portions and an identifier specifying the one of the plurality of dynamic portions of the displayed page to be replaced by the modified version of the one of the dynamic portions without transmitting a modified version of the entire displayed page.

Hawes discusses at col. 5 lines 16-26 that a browser accesses the web page URL to determine if a change in the non-cacheable portion of the page has occurred. However, the pending independent claims require the server to receive a change and not a browser on the client. Furthermore the pending claims require that in response to the notification of a change in data, the server executes an associated code fragment to produce a modified version of one of the plurality of dynamic portions and transmitting the modified version of one of the plurality of dynamic portions to the client. In Hawes, when the web server receives an updated non-cacheable portion, it doesn't inform the browser on the client. The browser has to check the web server that contains the web page URL to see if a change has occurred in the non-cacheable portion. Furthermore, nowhere does Hawes teach or suggest the limitation of transmitting a command from the server to instruct the client to replace one of the plurality of dynamic portions specified by an identifier using the modified version of the one of the plurality of dynamic portions. One of ordinary skill in the art will not modify Hawes to include the limitation of a server transmitting a command to instruct the client how to replace a dynamic portion because the client's browser, not the server, checks when changes occur in the page. Hence, the server is not able to transmit a command instructing the client how to replace a dynamic page.

Lafer does not cure the deficiency of Hawes. Lafer discusses a method and system for web site construction using HTML fragment caching. Lafer is not concerned about how to update a change on the web page. Nowhere does Lafer discuss a server receiving a notification of a change in data and in response to the notification, execute an associated code fragment to generate a modified version of one of the plurality of dynamic portions and transmitting the

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modified version of the one of the plurality of dynamic portions. Additionally, nowhere does Lafer teach or suggest the limitation of transmitting a command from the server to instruct the client to replace one of the plurality of dynamic portions specified by an identifier using the modified version of the one of the plurality of dynamic portions. There is no motivation for one of ordinary skill in the art to modify Lafer to include the limitation of transmitting a command to instruct a client how to replace a dynamic portion because Lafer merely teaches how to use cacheable HTML fragments on the server to customize a page before transmitting the page to the client. Therefore there is no need for the server to transmit the client anything else except the page itself.

Jois also does not cure the deficiency of Hawes and Lafer. Jois is focused on how to generate a composite website using multiple templates. However, Jois does not teach or suggest the limitation that the server receives a notification of a change in *data* and in response to the notification, execute an associated code fragment to generate a modified version of one of the plurality of dynamic portions and transmitting the modified version of the one of the plurality of dynamic portions. Jois discusses that a server receives an URL request from the client and the server would either fetch the client the requested web page or generate a requested composite web page. Nowhere does Jois mention a command for instructing the client on modification of the one of the plurality of dynamic portions. Furthermore, one of ordinary skill in the art would not be motivated to modify Jois to include a command for instructing the client on modification of the one of the plurality of dynamic portions because there is no need to do so to update a subpage, as the subtemplate would decide how changes are made according to different inputs and generate a complete new page and update the *corresponding* subpage with the new page. Additionally, because the subtemplate always updates the corresponding subpage at a predetermined location of a page, there is no need to provide a command to instruct the client where the changes should be made to a page.

Accordingly, the combination of Hawes, Lafer, and Jois do not teach or suggest each and every element and limitation of independent claims 1, 12, and 22, as amended. Applicants respectfully request that the Examiner reconsider and withdraw the rejection to independent claims 1, 12, and 22, and their dependent claims.

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CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants submit a petition for one-month extension of time with this amendment. However, if other fee is due, please charge our Deposit Account No. 12-0080, under Order No. CXT-054RCE from which the undersigned is authorized to draw.

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Respectfully submitted,

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